

What is claimed is:

1. A railway car comprising an underframe, side structures, and a roof structure, characterized in that

in the underframe, the material used to form both longitudinal ends of the car body is softer than the material used to form the longitudinal center portion thereof.

2. A railway car according to claim 1, wherein the members constituting the floor portion of said underframe characterize in that the material used to form said both end areas of the members is softer than the material used to form the center area thereof.

3. A railway car according to claim 2, wherein the members constituting the floor portion of said underframe and the side sills disposed at both width-direction-sides thereof characterize in that the materials used to form said both end areas of the members are softer than the materials used to form the center areas thereof.

4. A railway car according to claim 1, wherein one or more center sills disposed on the lower side of said underframe along the longitudinal direction of the car body for joining a coupler thereto characterize in that the material used to form both ends thereof is softer than the material used to form the center area thereof.

5. A railway car according to claim 1, wherein said side structures and said roof structure characterize in that the materials used to form said both end areas of the car body are softer than the materials used to form the longitudinal center areas thereof.

6. A railway car comprising an underframe, side structures, and a roof structure, wherein

said underframe is composed of plural hollow shape members; and

the direction of extrusion of said hollow shape members is disposed along the longitudinal direction of the car body, and said plural hollow shape members are arranged along the circumferential direction of the car body and welded to one another to form the railway car;

characterized in that said plural hollow shape members are formed so that the material used to form both longitudinal ends of the car body is softer than the material used to form the longitudinal center portions thereof.

7. A railway car according to claim 6, characterized in that

the hollow shape members composed of the material for forming said both ends are formed as separate parts from the hollow shape members composed of the material for forming said center portion,

and the parts are bonded to one another.

8. A railway car according to claim 7, characterized in that

of the plural hollow shape members disposed at both ends of the car body and the plural hollow shape members disposed at the center portion thereof, the two face plates constituting one hollow shape member are abutted against the two face plates constituting another hollow shape member, the abutted areas being welded;

according to said one hollow shape member, the longitudinal end portion of a connecting member connecting said two face plates is protruded from the end portions of said two face plates;

according to said other hollow shape member, the longitudinal end portions of said two face plates are protruded from the end portion of the connecting member connecting said two face plates; and

the connecting member of said one hollow shape member is disposed between the two face plates of said other hollow shape member.

9. A railway car according to claim 6, characterized in that

the hollow shape members composed of the material for forming said both ends and the hollow shape member composed of the material for forming said center portion are formed as one hollow shape

member.

10. A railway car according to claim 6, wherein said side sills disposed at both sides of said underframe characterize in that the material used to form said both end areas thereof is softer than the material used to form the longitudinal center areas thereof.

11. A railway car according to claim 6, wherein said one or more center sills disposed on the lower side of said underframe along the longitudinal direction of the car body for joining the coupler thereto characterize in that the material used to form said both end areas is softer than the material used to form the longitudinal center areas thereof.

12. A railway car according to claim 6, wherein said side structures and said roof structure are composed of a plurality of second hollow shape members;

the direction of extrusion of said plurality of second hollow shape members is disposed along the longitudinal direction of the car body, the plurality of second hollow shape members being arranged along the circumferential direction of the car body and bonded to one another; and

said plurality of second hollow shape members are formed so that the material used to form said both end areas is softer than the material used to form the longitudinal center areas

thereof.

13. A railway car according to claim 12, wherein said second hollow shape members composed of the material for forming said both ends and said second hollow shape member composed of the material for forming said center portion are separate members, and the members are welded together.

14. A railway car according to claim 13, characterized in that

of the plural second hollow shape members disposed at both ends of the car body and the plural second hollow shape members disposed at the center portion thereof, the two face plates constituting one hollow shape member are abutted against the two face plates constituting another hollow shape member, the abutted areas being welded;

according to said one hollow shape member, the longitudinal end portion of a connecting member connecting said two face plates is protruded from the end portions of said two face plates;

according to said other hollow shape member, the longitudinal end portions of said two face plates are protruded from the end portion of the connecting member connecting said two face plates; and

the connecting member of said one hollow shape member is disposed between the two face plates of said other hollow shape member.

15. A railway car according to claim 12, characterized in that

the second hollow shape members composed of the material for forming said both ends and the second hollow shape member composed of the material for forming said center portion are formed as one hollow shape member.

16. A railway car formation comprising plural car bodies being connected, characterized in that

both ends of each car body constituting a portion of a passenger room are equipped with parts that shrink in the longitudinal direction of said car body when a car body collides against another car body being adjacent thereto.

17. A railway car formation according to claim 16, characterized in that

said portion of a passenger room is an underframe of each car body, and the material for forming said both ends of said underframe is softer than the material for forming the longitudinal center area thereof.